

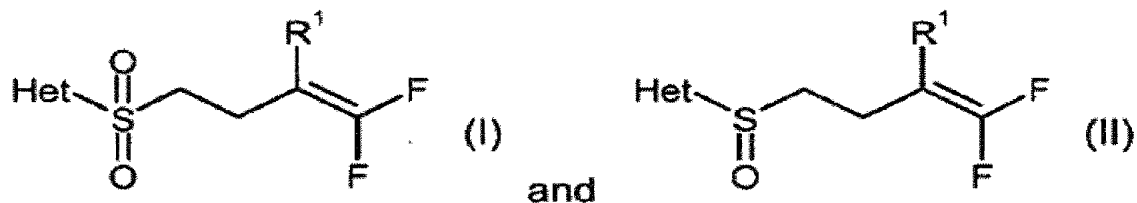
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1-10. (Cancelled)

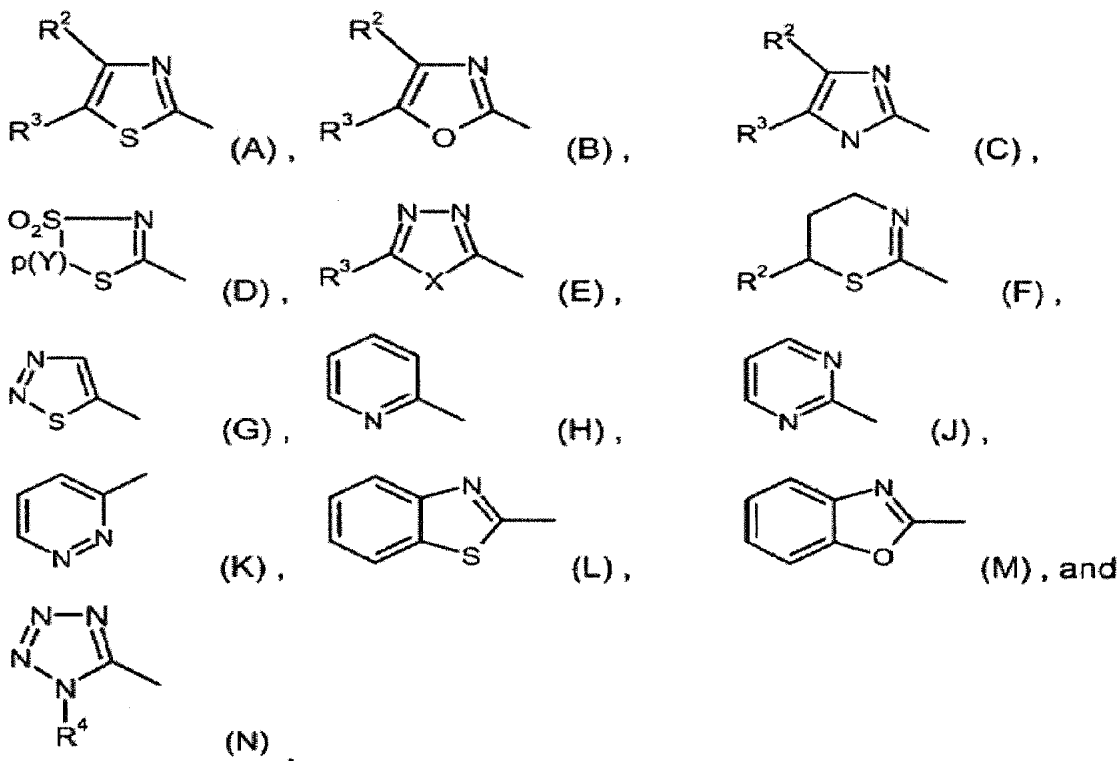
Claim 11 (Previously presented): A process for preparing heterocyclic fluoroalkenyl sulfone and sulfoxide compounds of formulas (I) and (II)



where

R¹ is hydrogen or fluorine, and

Het is a heterocycle selected from the group consisting of



where

R^2 is hydrogen, halogen, C_1 - C_2 -alkyl, or C_1 - C_4 -haloalkyl,
 R^3 is hydrogen or halogen; or is optionally halogen-,
methyl-, ethyl-, n- or i-propyl-, n-, i-, s-, or t-butyl-,
methoxy-, ethoxy-, n- or i-propoxy-, or n-, i-, s-, or
t-butoxy-substituted C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -
alkylthio, C_1 - C_4 -alkylsulfinyl, C_1 - C_4 -alkylsulfonyl, C_1 - C_4 -
alkoxycarbonyl, C_1 - C_4 alkoxy- C_1 - C_4 -alkyl, C_1 - C_4 -alkylthio- C_1 -
 C_4 -alkyl, carboxyl, C_1 - C_4 -alkylaminocarbonyl, C_3 - C_6 -
cycloalkylaminocarbonyl, C_1 - C_4 -dialkylaminocarbonyl, C_2 - C_4 -
alkenyl, C_2 - C_4 -alkenylthio, C_2 - C_4 -alkenylsulfinyl, or C_2 -
 C_4 -alkenylsulfonyl,

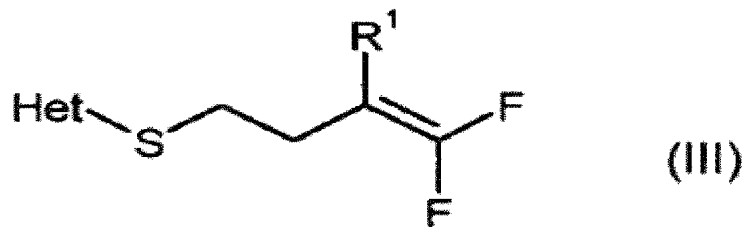
R is C₁-C₈-alkyl, C₂-C₆-alkenyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₁-C₄-alkylthio-C₁-C₄-alkyl, or C₃-C₈-cycloalkyl; or is optionally halogen-, C₁-C₄-alkyl-, C₁-C₄-alkoxy-, C₁-C₄-alkylthio-, or C₁-C₄-haloalkyl-substituted phenyl or benzyl,

p is 1, 2, or 3,

X is oxygen or sulfur, and

Y is methylene that is optionally singly or doubly, identically or differently, substituted with optionally halogen-, C₁-C₄-alkoxy-, C₁-C₄-alkylthio-, C₁-C₄-haloalkoxy-, or C₁-C₄-haloalkylthio-substituted C₁-C₄-alkyl, C₂-C₄-alkenyl, or C₂-C₄-alkynyl; or is phenyl that is optionally singly to triply, identically or differently, substituted with halogen, cyano, nitro, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-haloalkyl, C₁-C₄ haloalkoxy, or C₁-C₄-haloalkylthio,

comprising allowing a compound of formula (III)



where R¹ and Het are each as defined for formula (I),

to react with a salt of peroxomonosulfuric acid (H₂SO₅),

optionally in the presence of a reaction assistant and
optionally in the presence of a diluent, wherein the reaction
of a compound of formula (II) to formula (I) is conducted at a
pH of from 6 to 10.

Claim 12. (Cancelled)

Claim 13. (Cancelled)

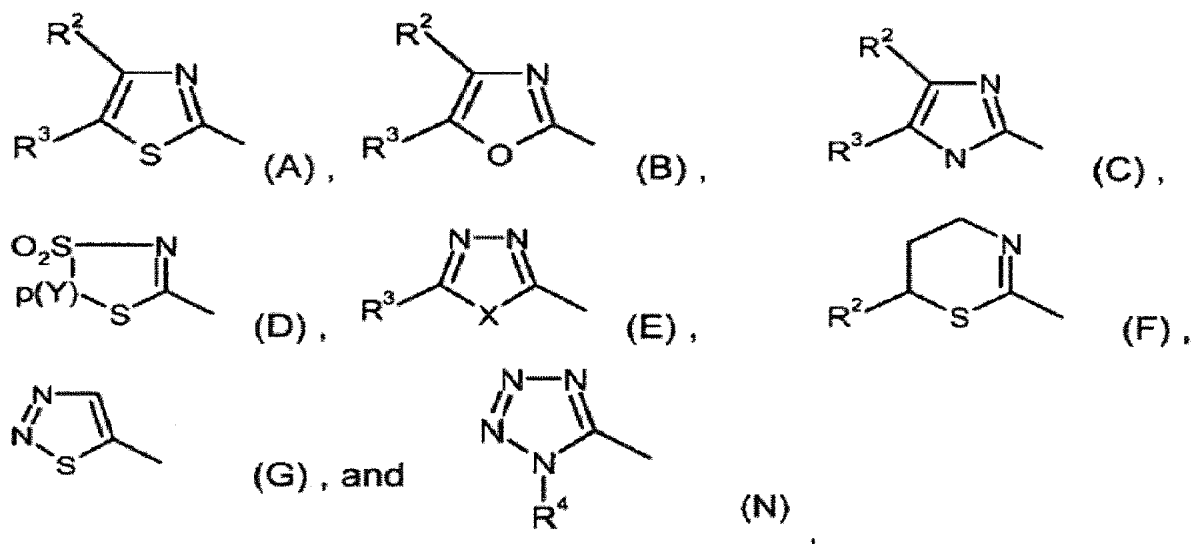
Claim 14. (Previously Presented) A process for
preparing compounds of formula (II) according to Claim 11
wherein a compound of formula (III) according to Claim 11 is
allowed to react with a salt of peroxomonosulfuric acid
(H_2SO_5), optionally in the presence of a reaction assistant and
optionally in the presence of a diluent.

Claim 15. (Previously Presented) A process
according to Claim 14 carried out at a pH of from 1 to 3.

Claim 16. (Previously Presented) A process
according to Claim 11 in which the salt of peroxomonosulfuric
acid is potassium hydrogenperoxomonosulfate ($2 \text{KHSO}_5 \bullet \text{KHSO}_4 \bullet$
 K_2SO_4 (5:3:2:2)).

Claim 17. (Previously Presented) A process
according to Claim 11 carried out at a temperature of from -
20°C to 150°C.

Claim 18. (Previously Presented): A process according to Claim 11 in which
 R^1 is fluorine,
Het is a heterocycle selected from the group consisting of



R^2 is hydrogen, fluorine, or chlorine,
 R^3 is hydrogen, fluorine, or chlorine; or is optionally
fluorine-, chlorine-, methyl-, ethyl-, n- or i-propyl-,
n-, i-, S-, or t-butyl-, methoxy-, ethoxy-, n- or i-
propoxy-, n-, i-, S-, or t-butoxy-substituted methyl,
ethyl, n- or i-propyl, n-, i-, S-, or t-butyl, methoxy,
ethoxy, n- or i-propoxy, n-, i-, S-, or t-butoxy,
methylthio, ethylthio, nor i-propylthio, n-, i-, S-, or
t-butylthio, methylsulfinyl, ethylsulfinyl,
methylsulfonyl, ethylsulfonyl, methoxycarbonyl,
ethoxycarbonyl, n- or i-propoxycarbonyl, n-, i-, S-, or

t-butoxycarbonyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, methylthiomethyl, methylthioethyl, ethylthiomethyl, ethylthioethyl, carboxyl, methylaminocarbonyl, ethylaminocarbonyl, n- or i-propylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl, cyclopentylaminocarbonyl, cyclohexylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, ethenyl, propenyl, or butenyl, R₄ is methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, tert-butyl, n-pentyl, cyclopropyl, cyclopentyl, cyclohexyl, 2-chloroethyl, 2,2,3,3,3-pentafluoropropyl, 2,2,2-trifluoroethyl, 3-bromopropyl, 2-methoxyethyl, 2-ethoxyethyl, 2-methylthioethyl, allyl, or 2-butenyl; or is optionally singly or doubly, identically or differently, fluorine-, chlorine-, bromine-, methyl-, ethyl-, isopropyl-, trifluoromethyl-, methoxy-, or methylthio-substituted phenyl or benzyl,

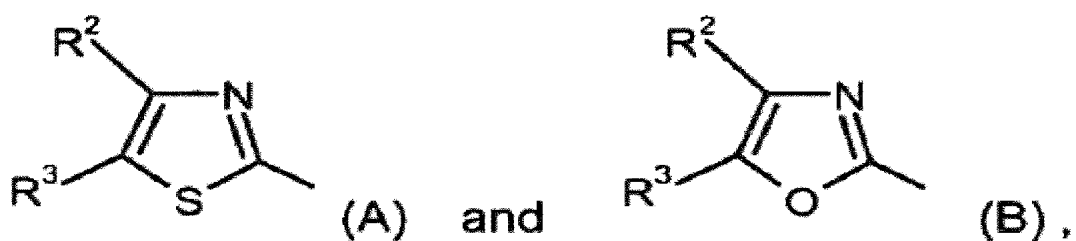
P is 1 or 2,

X is oxygen, and

Y is methylene that is optionally singly or doubly, identically or differently, substituted with methyl or ethyl; or is phenyl that is optionally singly to triply, identically or differently, substituted with fluorine,

chlorine, methyl, methoxy, trifluoromethyl, cyano, or
nitro.

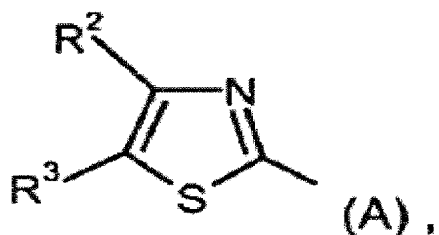
Claim 19 (Previously Presented): A process according
to Claim 11 in which Het is a heterocycle selected from the
group consisting of



R^2 is hydrogen, and

R^3 is hydrogen, fluorine, or chlorine.

Claim 20 (Previously Presented): A process according
to Claim 11 in which



R^2 is hydrogen, and

R^3 is chlorine.